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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,979	12/20/2000	Kazuhiko Takaishi	3408.65028	8648

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CHICAGO, IL 60606

EXAMINER
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WONG, KIN C

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 12/04/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/742,979

Applicant(s)

TAKAISHI, KAZUHIKO

Examiner

K. Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

This is a response to amendment filed on 8/8/03.

***Claim Objections***

Claim 1 is objected to because of the following informalities:

Claim 1, line 10; the phrase "moving speed of said had and obtaining" is not clear. Examiner has interpreted this phrase to be "moving speed of said head and obtaining" for this office action. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims (1-15) are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (5822144) in view of Shimizu et al (5383068).

Regarding claim 6: Takahashi discloses a head positioning control device (as depicted in figure 4 of Takahashi) for a disk device (as depicted in figure 5 of Takahashi) for positioning a head (element 14-1 in figure 5) to a predetermined position of a disk (element 66 in figure 5) by driving an actuator (element 58 in figure 5), including:

a demodulation circuit (element 44 in figure 4) which demodulates a position signal of the disk read by the head; and

a control circuit (element 30 in figure 4) which calculates a demodulation position according to the demodulation result and controls the actuator for driving the head by

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calculating control quantity according to the position errors between the demodulation position and the target position (see col. 6, lines 10-39 and col. 9, lines 7-29 of Takahashi);

wherein the control circuit corrects the demodulation result with a correction value which depends on the moving speed of the head and calculates the demodulation position (see col. 9, lines 49 to col. 10, line 40 of Takahashi).

Although Takahashi discloses all the limitations as recited in claim, Takahashi fails to mention the moving speed detection that based on the read position signal. Shimizu et al is relied on for the teachings of the moving speed detection that is based on the read position signal (col. 5, lines 28-50 of Shimizu et al).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify head position demodulation process of Takahashi which including the position read signal in the head position demodulation process as taught by Shimizu et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to provide a true head speed and location as suggested in col. 6, lines 13-19 of Shimizu et al.

Regarding claim 7: Takahashi teaches that wherein the demodulation circuit demodulates a first position information and a second position information, which have different phases from each other, from the position signal; and the control circuit compares the first position information and the second position information, corrects the first position information with a first correction value, which depends on the moving speed of the head, according to the comparison result, and corrects the second position

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information with a second correction value, which depends on the moving speed of the head, according to the comparison result (in col. 7, line 25 to col. 8, line 21 of Takahashi).

Regarding claim 8: the limitations of wherein the demodulation circuit demodulates a track number and offset information from the position signal; and the control circuit selects the track number as the demodulation position when the moving speed of the head is faster than a predetermined speed, and calculates a demodulation position by correcting the offset information with a correction value which depends on the moving speed of the head when the moving speed of the head is slower than a predetermined speed are known because in col. 6, lines 10-39 where Takahashi describes the similar offset (phase) information in respective to various speeds.

Regarding claim 9: the limitations of wherein the demodulation circuit demodulates a track number and offset information from the position signal; and the control circuit corrects the offset information with a correction value where gain, which depends on the recording position of the offset information, is added to the moving speed of the head with the recording position of the track number as a reference are considered known because the track number (location or position) and offset information are known to encoded in the positional burst signal and in the crossing points which is well known by the artisan in the art, and therefore, the decoding (demodulating) the track number and offset information known.

Regarding claim 10: Takahashi teaches that wherein the demodulation circuit demodulates a position signal of a magnetic disk read by a magnetic head (in col. 5, lines 37-42 of Takahashi).

Regarding claims 1-5: method claims (1-5) are drawn to the method of using the corresponding apparatus claimed in claims 6-10. Therefore method claims (1-5) correspond to apparatus claims (6-10) and are rejected for the same reasons of obviousness as used above.

Regarding claims 11-15: claims (11-15) have limitations similar to those treated in the above rejections, and are met by the references as discussed above. Claim 11 however also recites the following limitations of a disk drive that has met by Takahashi (in col. 5, lines 1-12 of Takahashi).

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection to the newly amended claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee (4516178) is cited for head position process with head speed that based on the position read signal.

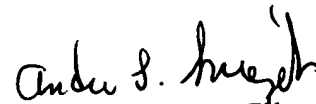
Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Wong whose telephone number is (703) 305-7772.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Hudspeth can be reached on (703) 308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

kw

28 Nov 03

  
ANDREW L. SNIEZEK  
PRIMARY EXAMINER